

# **K-12 FACILITY CONDITION AND NEEDS ASSESSMENT AND ENERGY AUDIT PHASE II**

A Report Prepared for the  
**Legislative Finance Committee**

By  
Catherine Duncan

September 25, 2007

Legislative Fiscal Division



[www.leg.mt.gov/css/fiscal](http://www.leg.mt.gov/css/fiscal)

# K-12 FACILITY CONDITION AND NEEDS ASSESSMENT AND ENERGY AUDIT – PHASE II

## BACKGROUND

During the December 2005 Special Session, the legislature passed HB 1, mandating Legislative Finance Committee (LFC) participation in the design of a K-12 condition and needs assessment and energy audit. This report will outline the responsibility of the LFC and update the committee on the progress that has been made to date. The LFC is urged to make recommendations and provide process approval, enabling the Department of Administration, Division of Architecture and Engineering (A&E), to continue moving forward on this project.

HB 1 provided an appropriation of \$2.5 million to A&E to provide or contract a condition assessment of existing K-12 facilities and to complete an energy audit. As stated in the text of the bill, the LFC is required to assist A&E in designing a process for collecting and analyzing the data. The purpose of the assessment is to provide the legislature with a measure of the major maintenance and energy improvement needs for K-12 facilities. The applicable language included in HB 1 was approved as follows:

**Section 1. Appropriations.** (1) (a) There is appropriated \$2.5 million from the general fund to the department of administration to be used through June 30, 2009, to pay for the costs of completing a condition and needs assessment and energy audit of K-12 public school facilities or for contracting with a private vendor to complete a condition and needs assessment and energy audit of K-12 public school facilities in the state.

(b) *The department shall work in conjunction with the legislative finance committee to design the process for collecting and analyzing data*, including data related to the total square footage, the percentage of the total square footage that is being utilized for educational programs, and the square footage per student, to be used in the facility condition and needs assessment and energy audit.

(c) On or before July 1, 2008, the department of administration shall report the findings and recommendations of the K-12 public school facility condition and needs assessment and energy audit to the appropriate committee of the legislature.

## PHASE I

A&E gathered the data needed to develop the process design in what was designated as “Phase I” of the project. In Phase I, A&E summarized pertinent background information on the public school system facilities including, but not limited to, the physical location of each school, the total number of buildings at each location, gross square footage of each building, and a point-of-contact for each school. Phase I consisted of a web-based survey designed to collect basic background data and resulted in the identification of approximately 300 school systems occupying slightly over 30 million gross square feet of facilities. A&E reported the Phase I results at the October 2006 meeting of the LFC. The LFC appointed Sen. Ryan, then a member of the LFC, to work with A&E on the design of the K-12 Facility Condition and Needs Assessment and Energy Audit design.

A&E met with Senator Ryan on several occasions and conducted several phone discussions where the information requirements and the scope of the project was discussed. With guidance from Senator Ryan, a proposal for the K-12 Facility Condition and Needs Assessment and Energy Audit was

developed. In August 2007, the A&E division appointed a consultant to conduct the phase II component of the assessment.

## **PHASE II PROPOSAL SUMMARY**

The recommended Phase II scope proposal is designed with three main components:

- o The development of an assessment tool
  - o A facility condition assessment tool will be developed, following the Montana University System FCI model. The tool will be used to gather and analyze the data needed for this assessment. The functionality will be developed to allow the tool to be used in future assessments and in an ongoing process
- o A point-in-time facility condition assessment
  - o Facility inspections will consist of the assessment of facility conditions and deficiencies and full documentation of facility functions (academic, athletic, administrative, physical plant, non-school, community, etc.), attributes (bus drop off, occupancy sensors, type of light fixtures, fire alarms and protection systems, site security, dual-circuit lighting, etc), and uses (music, computer lab, etc.)
- o An energy use assessment
  - o The consultant will analyze a minimum of two years of utility history, and/or other industry-recognized methodology, to create energy benchmarks for the facilities, detect consumption trends, and identify those facilities that exhibit excessive energy consumption. For facilities that benchmark poorly, a higher level audit will be recommended. More detailed energy audits will not be conducted as part of this project

This assessment will not be used to identify or recommend capital improvements into the future based upon long-term equipment/component depreciation schedules. The project will identify and cost existing, immediate, and near-term facility repairs and maintenance that fall within the two or three of the highest-priority categories, for example life-safety repairs.

## **CONCLUSION**

The A&E division has developed a proposal for Phase II of the K-12 Facility Condition and Needs Assessment and Energy Audit project. For your reference, a description of the proposal is attached to this document. Input from the LFC is required to assure that results can be reported as required in the legislation, on or before July 1, 2008. The A&E division requests the committee's comments on the proposed scope of the project, and subsequently, an endorsement of the proposal at the October 2007 LFC meeting. The LFC may wish to provide direction to A&E concerning project updates and the presentation of the final project results.

**PROJECT UPDATE:**

**K-12 PUBLIC SCHOOL FACILITIES  
FACILITY CONDITION ASSESSMENTS  
A/E PROJECT # 26-30-03**

Update as of September 25, 2007  
J. Triem, DOA-A&E Division

**GUIDING LEGISLATION:**

HB-1, 59<sup>TH</sup> Legislature Special Session, December 2005

**PROJECT COMPLETION DATE:**

June 30, 2008

**CURRENT STATUS:**

Phase 1 of the project has been completed.  
Phase 2 is now underway.

**PHASE 1 – “INITIAL DATA COLLECTION”**

The two main objectives of Phase 1 were to:

- 1) gather basic background data about each school's facilities with the intent of providing a clear understanding of the magnitude and distribution of K-12 public school facilities within the State – such that we could assess the criteria necessary to staff and perform the work within the time constraints required; and
- 2) provide early information related to school utilities and utility providers for use in Phase 2 benchmarking.

Understanding the magnitude of this endeavor was important; because based upon published national square footage averages per student we were predicting between 22 and 25 million gross square feet of facilities, and Phase 1 of this project resulted in the identification of approximately 300 school systems encompassing slightly over 30 million gross square feet of facilities.

Phase 1 information provided by each school includes:

- School System name and code;
- School Districts within the School System;
- Designated contact for this project;
- Enrollment;
- Number of buildings at each school;

Total gross square footage of buildings at each school;  
Does the school have an FCI program in place?  
Has the school performed an energy audit within the last 5 years?  
Information about each building;  
a) Building name or designation (unique identifier of each building);  
b) Building location (city, street address);  
c) Gross square footage;  
d) Date of original construction/major additions (if known);  
e) Whether or not blueprints are available;  
f) List all functions of building (academic, athletic, administrative, physical plant, non-school, community, etc.);  
g) Normal hours of usage;  
h) Identification of utility providers; quantity of utility meters at each school.

Phase 1 data collection was completed in the spring of 2007.

## **PHASE 2 – “FACILITY ASSESSMENTS”**

Phase 2 objectives include:

- 1) On-site assessments of facilities located at each and every school within the Montana K-12 public school system:
  - a) Investigation (before, during, or after conducting site visits):
    - Web/phone surveys
    - Remote data collection
    - Preparation and pre-population of visual inspection forms
    - Development of line drawings
    - Maintenance staff interviews
    - Follow-up to gather information missed in site visits
  - b) Visual inspection of facility conditions and deficiencies (what are the physical conditions of existing buildings):
    - Condition of existing buildings and components (MEP-systems)
    - Deficiencies of existing buildings and components
    - Visual audit and identification of energy and weatherization deficiencies
  - c) Full documentation (what exists)
    - Facility conditions
    - Facility functions (academic, athletic, administrative, physical plant, non-school, community, etc.)
    - Facility attributes (bus drop off, occupancy sensors, type of light fixtures, fire alarms and protection systems, site security, dual-circuit lighting, etc)

2) Collection and analysis of 2 years utility data for each school to benchmark all schools and identify those that exhibit excessive consumption:

- a) Utilize Phase 1 information to collect and analyze utility data for each school in order to benchmark all facilities and identify those that exhibit excessive consumption
- b) Analyze 2 years of utility history, or other industry-recognized methodology as approved by A&E, to develop consumption trends
- c) Recommend further action of a higher level of audit for those facilities that benchmark poorly

3) Delivery of a final report summarizing all findings and recommendations:

- a) Summarized and reported to the State in a form that meets the intended purpose of the legislation
- b) Allow full public access to all information and final reports
- c) Post all summaries, reports, and supporting documentation on the State's website to ensure easy, free and full public disclosure of the process and results of this project

The consultant and A&E Division will provide status updates and final presentations to the Legislative Finance Committee and other interested legislative committees, as requested by the Legislature. A&E anticipates that 6 committee updates and 2 final presentations will be required during this project.